

نام و نام خانوادگی پرورش بخش	پاسخنامه تشریحی تکلیف شماره ۱۲ کلاس ۱۳۹۷
الف) $t_n = k_n + 1$ ✓ ب) $(f_{10}) + 1 = 41$ ✓	۱
الف) $S_{10} = \frac{n}{2} (a_1 + a_n) = \frac{10}{2} (4 + 41) = 225$ ✓ ب) $t_n = f_n + 1$ $t_{10} = (f_{10}) + 1 = 41$ $t_{11} = (f_{11}) + 1 = 42$ $t_{12} = (f_{12}) + 1 = 43$ $t_{13} = (f_{13}) + 1 = 44$ ✓	۲
$4\sqrt{2}, 2, 2-\sqrt{2}, \dots \rightarrow d = 1-\sqrt{2}$ $t_{10}, t_{11}, t_{12} \rightarrow 2d = 2(1-\sqrt{2}) = 2-2\sqrt{2}$ ✓	۳
$a_n = \omega^{2n} + 2 \times \omega^{2n} + \omega^{2n} \rightarrow \omega^{2n} \times \omega^{2n} = \omega^{4n}$ $\omega^{2n+1} = \omega^{2n}$ $b_n = 2 = \frac{n+2}{2} \rightarrow n+2 = 4$ $n = 2$ ✓	۴
$2n-1, 2n-1, 4n, \dots$ $2n-1 + 2 = 2n+1$ $2n+1 = 4n \rightarrow 2n = 1 \rightarrow n = \frac{1}{2}$ $t_1 = 1 - 1 = 0$ $t_1 = \frac{1}{2} + 2 = \frac{5}{2}$ ✓	۵

$a_n = 2n+1 \rightarrow 1 \times 1 + 1 = 1$
 $b_n = 2n-1 \rightarrow 1 \times 1 - 1 = 0 \rightarrow 4n-1 = 0 \rightarrow 4n = 1 \rightarrow n = \frac{1}{4}$
 $4n-1 = 1 = 4n-1 \rightarrow 4n = 1 \rightarrow n = \frac{1}{4}$
 $(a_n) \cap (b_n) = \emptyset$ ✓

$a_1 + a_2 + a_3 = 1$
 $a_1 + d + a_1 + a_1 + d = 1$
 $3a_1 + 2d = 1$
 $a_1 = -\frac{1}{3}$
 a_1, a_2, a_3
 $a_1 = -\frac{1}{3}, a_2 = \frac{1}{3}, a_3 = \frac{1}{3}$
 $d = \frac{2}{3}$
 $2d - 1 - \frac{1}{3} = \frac{2}{3}$
 $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$ ✓

$a_1 + a_2 + a_3 = 1 \rightarrow a_1 + a_1 + d + a_1 + 2d = 1 \rightarrow 3a_1 + 3d = 1$
 $a_1 + d = \frac{1}{3}$
 $a_1 + 4d = 1 \rightarrow a_1 + d + a_1 + 3d = 1$
 $2a_1 + 3d = 1$
 $a_1 = \frac{1}{3} - d$
 $a_{10} = a_1 + 9d = \frac{1}{3} + 9d = \frac{1}{3} + 9 \times \frac{2}{3} = \frac{1}{3} + 6 = \frac{19}{3}$ ✓

$\frac{1}{5}(a_1 + a_9) = \frac{1}{5} \times 9(a_1 + a_9) \rightarrow \frac{1}{5} a_1$
 $\frac{1}{5} a_1 + \frac{1}{5} a_9 = \frac{1}{5} a_1 + \frac{1}{5} a_9$
 $9a_1 = \frac{1}{5} a_9 - \frac{1}{5} a_9$
 $9a_1 = \frac{1}{5} a_9 - \frac{1}{5} a_9$
 $9a_1 = \frac{1}{5} a_9 - \frac{1}{5} a_9$

$a_1 = 1$
 $11 + 4d = 19$
 $4d = 8 \rightarrow d = 2$
 $a_1 = 1$
 $11 + 4d = 19$
 $4d = 8 \rightarrow d = 2$
 $a_1 = 1$
 $11 + 4d = 19$
 $4d = 8 \rightarrow d = 2$

$d = \frac{b-a}{n+1} \rightarrow -\frac{1}{2} = \frac{19-1}{n+1} \rightarrow -\frac{1}{2}(n+1) = -10 \rightarrow -\frac{1}{2}(n+1) = -10$
 $n+1 = 20 \rightarrow n = 19$ ✓